

**Conference on Effectively Restoring Ecosystems  
22-24 August 2000, St. Louis, Missouri**

**BACKGROUND**

**Session:** Breakout 4C

**Topic:** Case Studies - Stream Restoration

**Moderator:** Bill Fickel, CESWF

**Recorder:** Tom Crump, CEMVS

**Panelists:**

- Charles Owens, CESAM
- Terry Stratton, CESAS
- Donald Powell, CEMVS

**Objective:** To identify characteristics of successful ecosystem restoration efforts and provide lessons learned.

**Description:** Moderator Bill Fickel opened breakout session 4c on Stream Restoration with some general comments about the high quality of the first day and a half of the conference. He is excited and encouraged by the level of commitment shown by everyone at the conference. Approximately 30 participants attended the breakout session.

**HIGHLIGHTS**

**Big Escambia Creek**

Charles Owens presented the first case study about Big Escambia Creek. The study is being conducted under the Section 206 Aquatic Ecosystem authority. The study area is in both Florida and Alabama. There are two problems negatively effecting the aquatic habitat of the river. A series of logjams have clogged the upper reaches, causing the river to scour a new channel. On the lower reach, the stream has broke out of its natural channel. Instead of flowing through swamp land and bottomland hardwoods, the stream now flows through old sandpits. The proposed project consists of stabilizing the upper reaches in the new channel around the logjams, and returning the lower reach back to its original channel. The anticipated benefits of the project include restoring over 1,000 acres of wetland and 850 acres of bottomland hardwood to provide freshwater fish habitat. The estimated cost of the project is \$6.4 million.

**Lower Savannah River**

Terry Stratton presented the second case study of the Lower Savannah River. This environmental restoration study was conducted under the GI program. The project PCA was signed in July. The historic Lower Savannah River project included oxbow cutoffs to improve the river channel in order to provide navigation. Currently, only the Nuclear Power Plant uses the river for navigation. Terry stressed getting all stakeholders involved in the planning process. Talks with the power plant identified an operation plan of storing water in the upstream reservoir, then releasing water to augment natural flows to allow navigation, that in turn allow natural resource improvements to the river. During

the review process, it was identified that the first plan formulated would have negatively impacted a unique stand of virgin hardwoods. The project was re-formulated using two benefit categories, fish habitat and bottomland hardwoods. A low cost plan that would address the local sponsor's water quality needs while providing cost effective environmental restoration benefits was identified. The Fish and Wildlife Service had agreed to perform long term monitoring. In response to a question from the audience, Terry explained that an incremental analysis was done to balance the two environmental benefit categories, and that the water supply/water quality benefits were not quantified nor used to justify the project.

### **Upper Mississippi River**

Don Powell presented the third case history about the Environmental Management Program on the Upper Mississippi River. This program is used to restore, protect and monitor the UMR. Long Term Resource Monitoring, conducted by the USGS, accounts for one third of the budget, while habitat construction accounts for the remainder. The program uses the technically sound habitat needs assessment tool to identify and prioritize projects. Types of projects include island construction, water control structures, water level management, bank stabilization and deep water dredging. Don gave brief descriptions of six completed projects – Pool 8 Island (island construction); Polander Lake (beneficial use of dredge material); Finder Lakes (culverts installed to increase D.O. levels); Small Scale Drawdown (demonstration project of lowering summer pool levels); Bank Stabilization; and Lake Onalaska (dredging and island construction). Don explained about bank stabilization methods used in the program, including traditional rock placement, planting willows, flattening slopes and off shore rock mounds.

In conclusion, Bill commented that we have lots to learn from one another.